

# REVISED VERSION

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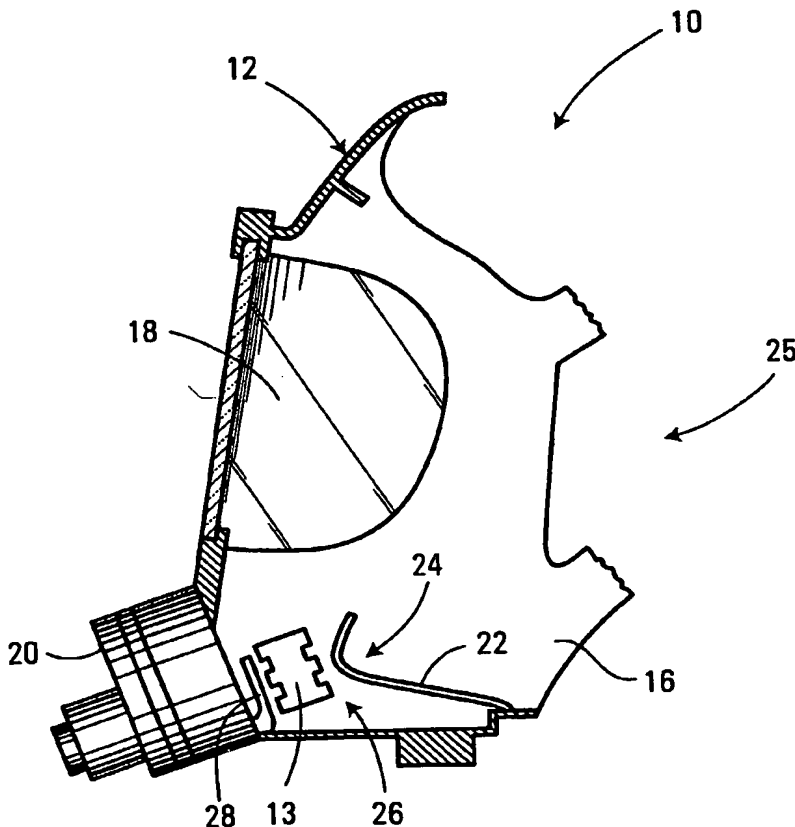
## PCT

**(10) International Publication Number**  
**WO 2003/103773 A1**

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| <p>(51) <b>International Patent Classification<sup>7</sup>:</b><br/>H04B 1/38</p> <p>(21) <b>International Application Number:</b><br/>PCT/CA2003/000796</p> <p>(22) <b>International Filing Date:</b> 27 May 2003 (27.05.2003)</p> <p>(25) <b>Filing Language:</b> English</p> <p>(26) <b>Publication Language:</b> English</p> <p>(30) <b>Priority Data:</b><br/>60/385,580 5 June 2002 (05.06.2002) US</p> <p>(71) <b>Applicant (for all designated States except US):</b><br/><b>GRAYLING WIRELESS INC.</b> [CA/CA]; 19 Castlebrook Court NE, Calgary, Alberta T3J 1Z6 (CA).</p> | <p>(72) <b>Inventor; and</b></p> <p>(75) <b>Inventor/Applicant (for US only):</b> <b>WILLIAMS, Robby, Gordon</b> [CA/CA]; 19 Castlebrook Court NE, Calgary, Alberta T3J 1Z6 (CA).</p> <p>(74) <b>Agent:</b> <b>SMART &amp; BIGGAR;</b> KNOX, John, W., Box 11560, Vancouver Centre, 650 West Georgia Street, Suite 2200, Vancouver, British Columbia V6B 4N8 (CA).</p> <p>(81) <b>Designated States (national):</b> AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.</p> |
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*[Continued on next page]*

- (54) Title: COMMUNICATION APPARATUS, METHOD AND SYSTEM FOR A SELF-CONTAINED BREATHING APPARATUS**



**(57) Abstract:** A method of facilitating communications for a wearer of a mask, such as a firefighter's breathing apparatus, involves receiving a removable transmitter apparatus in a receptacle in the mask, to permit the transmitter apparatus to receive acoustic utterances made by the wearer of the mask and to transmit electromagnetic radiation representing the utterances for reception by a receiver. The receiver receives the electromagnetic radiation and broadcasts an audible reproduction of the acoustic utterances. The receiver may be supported by a wearer of the mask so that listeners in the vicinity of the wearer can hear the utterances. A plurality of wearers of masks may each have the apparatus described above to create a mobile public address system in which the utterances of a plurality of wearers may be broadcast from each wearer to other people in the vicinity of the wearers.

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(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

(88) **Date of publication of the revised international search report:** 13 May 2004

(15) **Information about Correction:**  
see PCT Gazette No. 20/2004 of 13 May 2004, Section II

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

Inventor Application No  
PCT/EP 03/00796

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A62B18/08 H04B1/38

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A42B H04B A62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 566 362 A (SKILLICORN GREG L ET AL) 15 October 1996 (1996-10-15) column 4, line 12 - line 13 column 4, line 48 - line 54 figure 1A figure 2	1
X	US 4 885 796 A (LOFTUS DANIEL L ET AL) 5 December 1989 (1989-12-05) column 2, line 32 - line 63 figure 3	1
X	US 6 121 881 A (PULVER FRED ET AL) 19 September 2000 (2000-09-19) column 1, line 50 - line 61 figure 1 figure 2A	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 August 2003

Date of mailing of the international search report

03/09/2003

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA 03/00796

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 2-61  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 2-61

Claim 1 is not novel when compared to the disclosure of US 5 566 362. In view of the large number and also the wording of the remaining claims presently on file, which render it difficult, if not impossible, to determine the matter for which protection is sought, the present application fails to comply with the clarity and conciseness requirements of PCT Article 6 (see also PCT Rule 6.1(a)) to such an extent that a meaningful search on the basis of the claims is impossible.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

**CORRECTED VERSION**

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Application No

PCT/CA 03/00796

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5566362	A	15-10-1996	EP 0772917 A1 WO 9530285 A1	14-05-1997 09-11-1995
US 4885796	A	05-12-1989	NONE	
US 6121881	A	19-09-2000	US 5990793 A AU 5244899 A WO 0007157 A1	23-11-1999 21-02-2000 10-02-2000